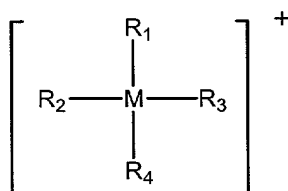


## ABSTRACT

The present invention relates to processes for preparing a nanocomposite comprising:

- a. preparing an organoclay material by reacting a swellable layered clay with an onium ion represented by Formula (I):



wherein

- i) M is nitrogen or phosphorus,
  - ii) R<sub>1</sub> is a straight or branched alkyl group having at least 8 carbon atoms,
  - iii) R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are independently selected from organic or oligomeric ligands or hydrogen, and
  - iv) at least one of R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> comprises an alkylene oxide group having from 2 to 6 carbon atoms or a polyalkylene oxide group, and
- b. melt mixing the organoclay material with an expanding agent, and
  - c. melt extruding the expanded organoclay and a polymer to provide a nanocomposite.